

**PENGARUH PENAMBAHAN GULA PADA BERBAGAI KONSENTRASI TERHADAP
STABILITAS WARNA ANTOSIANIN BUAH MURBEI HITAM
(*Morus nigra* L.)**

***THE EFFECT OF SUGAR ADDITION AT VARIOUS CONCENTRATION ON STABILITY
OF ANTHOCYANIN COLOR IN BLACK MULBERRY (*Morus nigra* L.)***

Erlien Giovani Soeroso¹, Lydia Ninan Lestario², Yohanes Martono²

¹ Mahasiswa Program Studi Kimia Fakultas Sains dan Matematika

² Dosen Program Studi Kimia Fakultas Sains dan Matematika
Universitas Kristen Satya Wacana

Jl. Diponegoro 52-60 Salatiga 50711 Jawa Tengah - Indonesia

652013006@student.uksw.edu

ABSTRACT

Anthocyanins are red to purple pigments which have high antioxidant activity and have potential as a natural safe food colorant. However, these pigments are less stable against some factors. The aims of this research were to determine the effect of sugar addition on anthocyanin stability of black mulberry by different intensities of fluorescent light and determine the appropriated concentration of sugar that could increase the stability of black mulberry anthocyanin. The concentration of sugar addition were: 20, 40, and 60% (w/v); the intensity of light were 3370 (18), 4210 (23) and 8820 lux (32 watt) by fluorescent lamp for 60 hours to black mulberry fruit extract (10.09 g/L). Determination of anthocyanin color stability on extract of black mulberry fruit was performed using degradation kinetics modeling to obtain the appropriate order. And then the concentration rate (k) and half life ($t_{1/2}$) was calculated based on appropriated order. The results showed that sugar addition at 20% could increase stability of black mulberry anthocyanin extract compared to control (without sugar addition), reflected from increasing of half life from 171.233 to 183.150 hours; however when concentration of the sugar addition were increased to 40 and 60%, the stability of anthocyanin decrease with half life 166.667 and 147.059 hours respectively. Therefore, concentration of 20% sugar addition was the best concentration that could increased the stability of black mulberry anthocyanin.

Key words : Anthocyanins, black mulberry, color stability, fluorescent light, sugar.